Discrepancies Not Only in Physicians, But Also in Atrial Fibrillation Guidelines

Atrial fibrillation (AF) is an established risk factor for a first or recurrent stroke.[1] The advent of direct oral anticoagulants (OACs) has resulted in a choice of therapeutic agents for stroke prevention in patients with AF in addition to Vitamin K antagonists (VKA). Although there are many recommendations of different societies such as American College of Cardiology/American Heart Association/Heart Rhythm Society (AHA/ACC/HRS), European Society of Cardiology (ESC), and Canadian Cardiovascular Society AF guidelines, there are important differences among them. Specifically, major differences can be observed in the nomenclature of OACs, the definition of nonvalvular AF (NVAF), the stroke risk stratification algorithm used to determine criteria for oral anticoagulant therapy, and the role of acetylsalicylic acid (ASA) in stroke prevention in AF.

In this issue of the journal, Sanliap *et al*.[2] published an interesting web-based survey regarding possible discrepancies on perception and management strategies of AF expressed by Turkish physicians.

Various terms have been used to describe the "new" class of OACs. The International Society on Thrombosis on Haemostasis suggests using the term "direct oral anticoagulant [DOAC]" to this treatment that directly inhibits a single target and has clinical properties (dabigatran, rivaroxaban, apixaban, edoxaban, and betrixaban) based on a web-based survey which includes 16 thrombosis, hemostasis, anticoagulation, and vascular medicine societies from North America and Europe (total 150 participants).[3] However, ESC prefers non-VKA OACs (NOACs) which is currently the main term used by the much larger community of cardiologists.[4]

Beyond the nomenclature, there are important differences in the definition of NVAF. In 2018, the European Heart Rhythm Association suggested a novel classification for NVAF.[5] According to this guide, Evaluated Heart valves, Rheumatic or Artificial (EHRA) categorization is proposed, depending on the type of OAC use in patients with AF. EHRA Type 1 refers to AF patients with valvular heart disease (VHD) needing therapy with a VKA, including in particular moderate–severe mitral stenosis of rheumatic origin and mechanical prosthetic valve replacement. In contrast, EHRA Type 2 VHD refers to VHD patients needing thromboembolic prevention therapy for AF with a VKA or a NOAC, including essentially all other native valvular stenoses and insufficiencies as well as mitral valve repair, bioprosthetic valve replacements, and transaortic valve intervention.

In 2019, update of 2014 AHA/ACC/HRS AF guideline states VHD more narrowly as moderate-to-severe mitral stenosis (any etiology) or mechanical heart valve.[6]

Interestingly, although there are no specific statements about any valve regurgitation in guidelines, Sanliap *et al*.[2] found that 36% of participants evaluated mitral regurgitation as valvular AF.

For stroke risk prediction, guidelines use the CHA_2DS_2-VAS_c score.[6,7] Although the ESC was first to adopt CHA_2DS_2-VAS_c score, in 2016, the ESC guideline modified the criteria of female sex as an independent risk factor, perceiving that "female sex does not appear to increase stroke risk in the absence of other stroke risk factors." In line with the ESC, recent AHA/ACC/HRS guideline changed previous suggestions to female sex, if the only risk factor, does not confer a CHA_2DS_2-VAS_c score of 1. Female sex adds to the score only when another risk factor is present.[6] Both guidelines recommend to use OACs for patients with AF and CHA_2DS_2-VAS_c score of 2 or greater in male or 3 or greater in women (Class 1 recommendation). However, there is a discrepancy between two guidelines to use OAC for patients with AF and CHA_2DS_2-VAS_c score of 1 in male or 2 in women. While the ESC makes a Class 2a recommendation for these groups, according to the recent AHA/ACC/HRS guideline, OAC use might be reasonable (Class 2b recommendation).

The ESC has entirely eliminated ASA from their guidelines in 2016. Similarly, the current AHA/ACC/HRS guideline does not recommend ASA for patients with low CHA_2DS_2-VAS_c score. When OAC is indicated, a preference for DOAC over VKAs is expressed by both AHA/ACC/HRS and ESC (Class 1 recommendation).[6,7]

Sanliap *et al*.[2] reported in their survey that 63% of physicians preferred to use OACs in AF patients with CHA_2DS_2-VAS_c score of 1 in male or 2 in women. In addition, 21% of them prescribed ASA (answers from question 10). Nevertheless, 71% of physicians set CHA_2DS_2-VAS_c score 2 or greater as the limit to start OAC therapy in a female patient with AF (answer from question 17). Because question 10 and 17 interrogated the knowledge of AHA/ACC/HRS and ESC guidelines, respectively, these findings support the discrepancies of them.

Another finding from the survey was 26% of the physicians preferred ASA in older patients. In furtherance, 21% of participants did not prefer to use OAC in geriatric population and concomitant risks (e.g., risk of falling). However, falling risk should not be an exclusion criterion to anticoagulant since

older patients are at an increased risk of stroke and have been shown to benefit from OAC.[5]

In conclusion, in spite of the small number of participants, this present study represents a nice addition to a growing body of evidence how they were perceived by Turkish physicians. The contemporary management of AF continues to evolve as the new trials and guidelines are published. Because of inadequate findings for specific subgroups/conditions, we need more data from well-designed studies for the potential use of these therapeutic agents in AF.

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Submission: 13-Feb-19 **Revision:** 16-Feb-19 **Accepted:** 18-Feb-19

Access this article online

Quick Response Code:

Website: http://www.ijcva.com

DOI: 10.4103/IJCA.IJCA_13_19

How to cite this article: Kocabay G. Discrepancies not only in physicians, but also in atrial fibrillation guidelines. Int J Cardiovasc Acad 2019;5:66-7.